amateur radio

. . . In The Public Interest

1976 Annual Report • The American Radio Relay League

Amateur Radio Today:

Annual Report 1976

THE AMERICAN RADIO RELAY LEAGUE
National Association of U.S. and Canadian Radio Amateurs, Newington, Connecticut

On The Move—Personal Communication

Serving Human Needs Without Boundaries

This is an Age of Discovery. As the limits of the universe we know shrink, so too do the limits both physical and ideological of our passenger-carrying planet Earth. In this process mass communication has played a major and essential role. Now a whole new dimension has been added. With the CB or Citizens Band explosion, literally millions of people have discovered in a very short period of time a new way of communicating with each other on a direct personal basis. The language of CB has already become a part of the vernacular, and the impact of CB on our way of life may yet come to rival that of the telephone.

However, no radio service can be all things to all people, and CB is no exception. As a wide-open communications medium available to all, it has very distinct limitations for anyone who wants to pursue a deeper interest in radio communication. Fortunately, this interest can be pursued today through another service which has existed as long as radio itself: the Amateur Radio Service. Amateur radio is not an exclusive club: for more than half a century, statesmen and schoolboys, housewives and scientists, factory workers and college professors have shared this unique personal communication medium without boundaries of economics, occupation, or social level. The common bond is a tradition of skills and service. With some help from the League (see details of the new recruiting and training program later in this report) CBers are discovering the opportunity offered by amateur radio and moving into the amateur ranks in growing numbers. To a large extent this CB influx accounts for a renewed surge of growth in the amateur population after a decade of relative stability.

Established under international treaty agreements and subject in all countries to government licensing and regulation, amateur radio is a unique avocation. In 1979 the international community will convene once again in Geneva to re-examine the international allocation of the radio frequency spectrum. The radio spectrum is a finite resource much coveted by other communications services—commerical, governmental, military, maritime, aeronautical, etc. As headquarters society for the International Amateur Radio Union, the League is spearheading preparations to meet the challenges posed by the Conference for the preservation and expansion of the amateur frequencies.

Amateur radio has a long record which demonstrates its value as an international and national resource for vital emergency communications services, as an important source of scientific and technical skills, as a unique medium for world-wide people-to-people communication. That is the basis for its traditionally close working relationships with the U.S. and other governments. Herbert Hoover, Jr., W6ZH, former League president, summed it up this way: "It was the determination that amateurs should have access to a limited but adequate share of the radio spectrum, under rules and regulations that would provide an incentive for voluntary public service, that originally made this activity possible—and has kept it going ever since."

Harry J. Dannals.

Harry J. Dannals, W2HD
President

R Baldwin

Richard L. Baldwin, W1RU
General Manager

OFFICERS

President
Harry J. Dannals, W2HD
Dix Hills, New York

First Vice President
Victor C. Clark, W4KFC
Clifton, Virginia

Vice President
Noel B. Eaton, VE3CJ
Waterdown, Ontario

Vice President
Carl L. Smith, W0BWJ
Denver, Colorado

Treasurer
John Huntoon, W1RW
East Hartford, Connecticut

Secretary & General Manager
Richard L. Baldwin, W1RU
Simsbury, Connecticut

BOARD OF DIRECTORS

Ronald J. Hesler, VE1SH
Sackville, New Brunswick

Harry A. McConaghy, W3SW
Bethesda, Maryland

Don C. Miller, W9NTP
Waldron, Indiana

Garfield A. Anderson, K0GA
Minneapolis, Minnesota

Max Arnold, W4WHN
Nashville, Tennessee

Richard A. Egbert, W8ETU
Reynoldsburg, Ohio

Stan Zak, K2SJO
Port Chester, New York

Paul Grauer, W0FIR
Wilson, Kansas

John C. Sullivan, W1HHR
Columbia, Connecticut

Robert B. Thurston, W7PGY
Seattle, Washington

J. A. Gmelin, W6ZRJ
Cupertino, California

L. Phil Wicker, W4ACY
Greensboro, North Carolina

Charles M. Cotterell, W0SIN
Lakewood, Colorado

Larry E. Price, W4RA
Statesboro, Georgia

John R. Griggs, W6KW
Los Osos, California

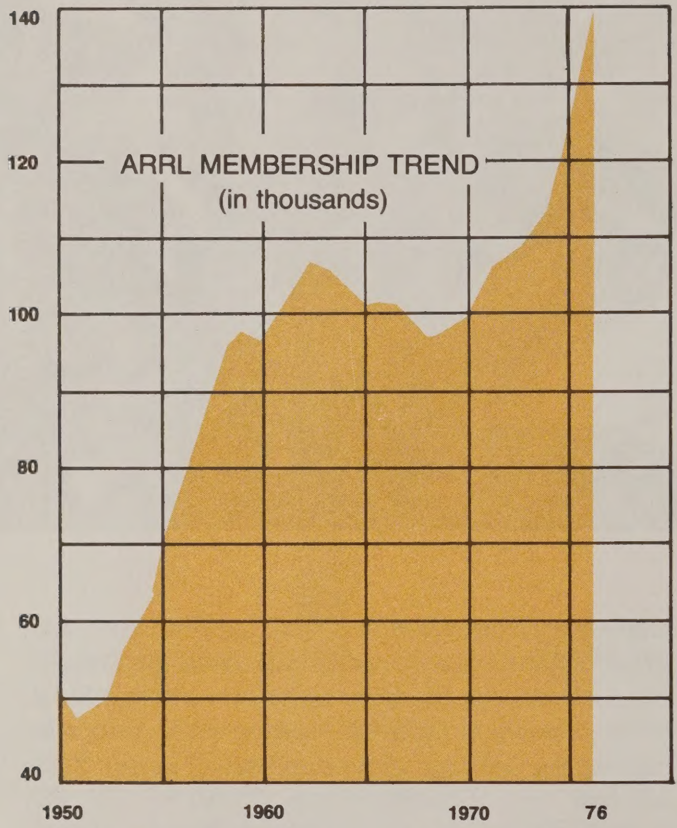
Jack D. Gant, W5GM
Ardmore, Oklahoma

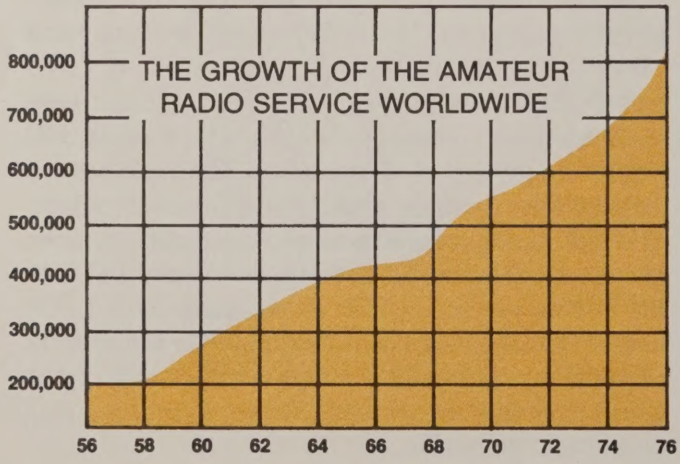
TARGET:

100,000 NEW RADIO AMATEURS

Recent growth in the radio amateur ranks, worldwide and particularly in the United States, is impressive, but this is only the beginning of a sharply accelerating curve. Recruitment and training of new amateurs has always been a major function of the League. Its introductory publications and its instructional aids for local radio clubs have provided the route for the vast majority of newcomers for many years. Early in 1976, however, the League's Board of Directors authorized a bold new program which has resulted in (a) the creation of a new staff department at headquarters, (b) the development of a totally new beginner instructional package incorporating a manual and a code cassette, (c) preparation of a complete, comprehensive Instructor's Guide for the elementary Novice license course, supplied at no cost to radio clubs, school systems and others planning to conduct courses, (d) an array of new informational and promotional materials to assist local groups in offering the amateur radio opportunity to the community, and (e) a new film, MOVING UP TO AMATEUR RADIO, designed primarily to be shown to local groups of CBers. The results to date have exceeded all expectations. During the Fall of 1976 nearly 1500 community level licensing classes were conducted across the continent—up from about 300 during the same period a year ago. These classes are expected to produce about 20,000 new Novices. The indications are that a nearly equivalent number of classes will be held in the early months of 1977. In the last six weeks of 1976 alone, more than 1,000 informational packets were distributed in response to requests for information about amateur radio from youth organization members, students, teachers, and youngsters generally.

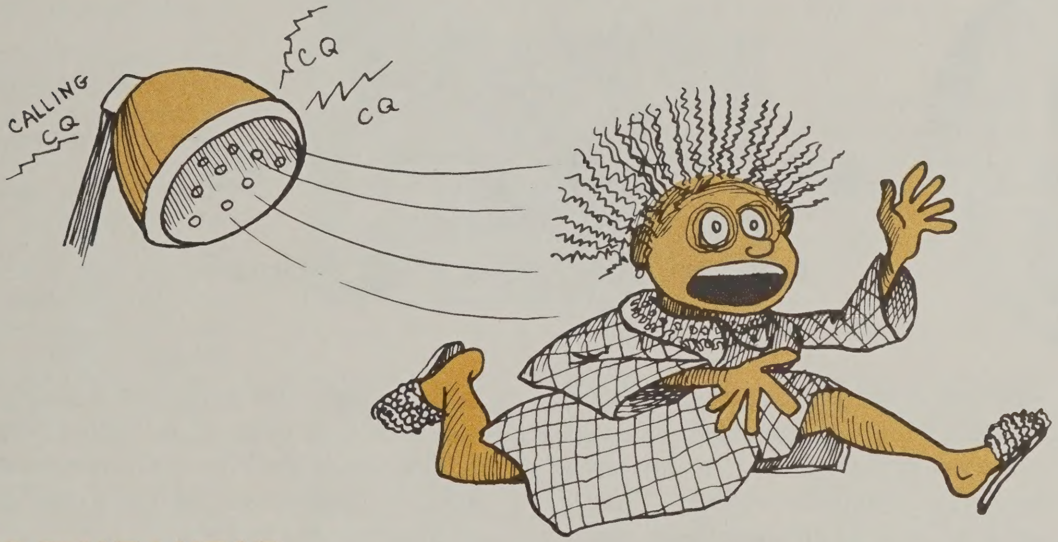
THE AMERICAN RADIO RELAY LEAGUE. ARRL is the bi-national association of U.S. and Canadian amateur radio operators with a current membership in excess of 140,000. It is also the headquarters society of the International Amateur Radio Union which has nearly 100 similar membership organizations. The League publishes a monthly technical and organizational journal, QST, the annual RADIO AMATEUR'S HANDBOOK, and a number of other specialty books and manuals; it operates W1AW, the headquarters station which transmits a daily schedule of code practice sessions and bulletins of information for amateurs. The affairs of the League are administered by a regionally-elected, unpaid Board of Directors, six unpaid officers, and a headquarters staff of about 110 full-time employees.





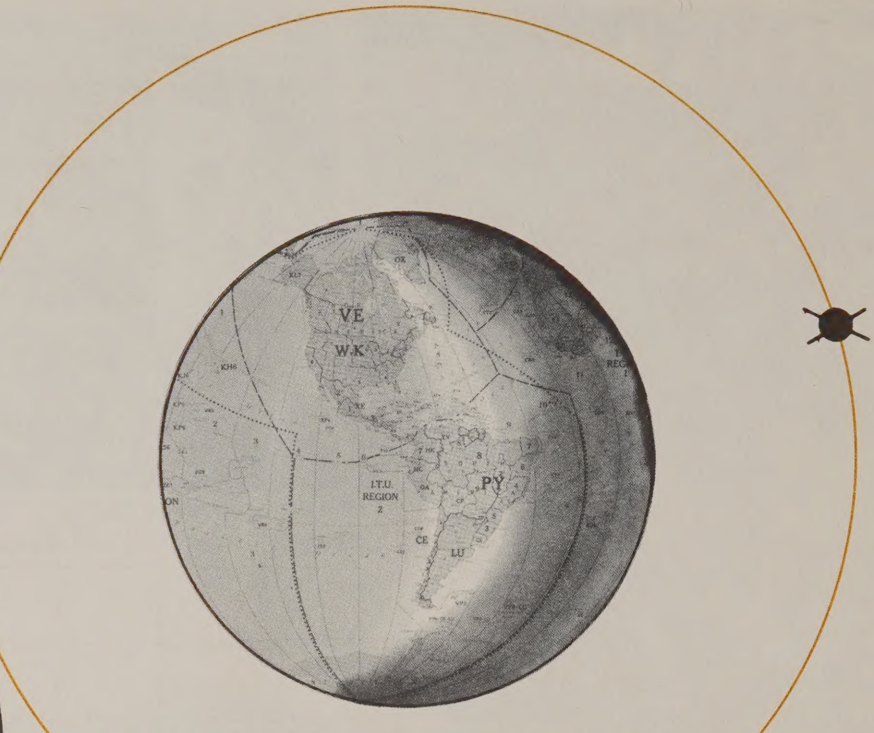
Amateur Radio
Make this the year that you get your "ham" license!
ANSWERS TO YOUR QUESTIONS ON AMATEUR RADIO
AMATEUR RADIO IN ACTION...
Moving Up to Amateur Radio
NEW HAM NEWS
TUNE IN THE WORLD WITH HAM RADIO
I Just Talked With A Friend In Teheran On My Own Ham Station
Radio–Ham or CB They're not the same thing
A guide for reporters distributed by the American Radio Relay League
135,000 strong
~~100,000~~
THE AMERICAN RADIO RELAY LEAGUE
amateur radio
A NATIONAL RESOURCE

HAM OR CB—WHAT'S THE DIFFERENCE? The Amateur Radio Service and the Citizens Radio Service are separate and distinct, with these basic differences: a ham station's call letters consist of a one or two letter prefix, a single numeral and a two or three letter suffix (W1AW); a CB station is identified by a three or four letter prefix, followed by a four digit number (KGA1234). CBers are not required to pass an examination, pay a fee only; hams qualify for successively higher licenses by passing tests of Morse code proficiency, technical and regulatory knowledge. There are no restrictions on the distance a ham may "talk:" CBers are limited to 150 miles. In essence, amateur radio is a world-wide service for personal satisfaction and public service; the citizens service is intended for short distance personal communications and public service. (From a guide for reporters, prepared and distributed by ARRL.)



WHAT'S THAT I HEAR IN MY HAIR DRYER?

. . . . . Or my TV . . . Or my stereo. It's RFI—radio frequency interference—and a growing annoyance to many owners of home entertainment equipment of all sorts. Interference complaints are coming in to the Federal Communications Commission at the rate of 100,000 per year. *TV GUIDE* recently reported that 87% of these complaints are attributable to CB radio—and the majority involve TV. All too often, if there's a radio amateur or more recently a CBer in the neighborhood, he or she gets the blame. Actually, the cause is far more often in the receiving equipment itself—radio, TV or stereo. Interfering signals from unwanted sources can usually be prevented by a simple device to filter them out, but since most TV, radio and stereo sets are not going to be operated in the vicinity of the strong signals which can cause interference, most manufacturers simply do not add that one more element to the cost. The problem has long concerned the League, and a system of local committees was established to assist local amateurs in identifying and eliminating interference as a service to its victims. Legislation was introduced in the last Congress by Representative Charles Vanik and Senator Barry Goldwater to give the FCC authority to set standards for the susceptibility of home entertainment devices to radio frequency energy. While this legislation did not get to the floor, similar bills are expected to be introduced in the upcoming session of Congress. Where up to 90% of the interference experienced today is caused by deficiencies in the receiving equipment rather than by transmitters—amateur or CB—the need for such legislation is clearly evident. This is a cause in which the League and its membership are fully committed to working for the public interest.



AMATEUR SATELLITES

And The Oscar Education Program

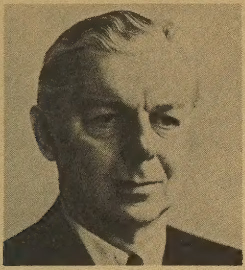
The first non-governmental, non-military space satellite went into orbit in 1961 as a passenger on an Air Force rocket. It was designed and built by a group of California radio amateurs who christened it "Oscar" for Orbiting Satellite Carrying Amateur Radio. Oscar 1 was essentially a scientific experiment—today Oscars 6 and 7, both in orbit, both built by international teams of amateurs in several countries, and both launched by NASA, are space radio relay stations used by thousands of radio amateurs in more than 100 countries for casual communication, for emergency messages and for sophisticated experiments.

But the two Oscars are more than vehicles for ham use. They are being used in a program developed by the League in cooperation with NASA in classrooms across the country and abroad as a teaching aid in physics, mathematics, space science, computer technology and even the social sciences. As a direct, live experience in space communications the program has generated consistent excitement among both students and teachers. Thousands are using a curriculum supplement and other materials developed and supplied by the League. Classroom Oscar demonstrations are staged by local radio amateurs in the community; others provide a schedule of educational bulletins for educators through the satellites. The two-hour, polar orbits of the Oscars make them readily accessible. Where a local amateur is not available, the teacher can even use a standard short-wave receiver to tune in Oscar.

Antenna Marks Amateur Station at Florida's Kennedy Space Center

TOPICAL NOTES & COMMENT

IN THE MIDDLE EAST: A NEGLECTED RESOURCE



Armin Meyer, W3ACE, Former U.S. Ambassador to Lebanon, Iran and Japan.

Long a respected facet of American life, amateur radio is encouraged by our government, performs invaluable service, and is enjoyed by more than a quarter of a million of our citizens.

It is no surprise that amateur radio flourishes in the world's greatest democracy. There appears to be a correlation between the health of a nation and the health of amateur radio.

Having only recently returned from a month's safari in the Middle East, my mind has inevitably focused on the challenges which face our friends in that region. In Cairo, dining on the banks of the Nile with one of our fellow amateurs, I learned that the greatest barrier to more widespread amateur activity in Egypt is the shortage of foreign exchange, which is necessary to purchase the equipment so readily available to Americans and other amateurs. In Saudi Arabia and Iran, money is not a problem, but there remain certain psychological barriers which tend to restrict the number of licenses issued, expatriates often being considered safer than local nationals. Totally unrecognized is the tremendous capability which amateur radio has for training the technicians so critically required to man the vast development programs being launched by those countries.

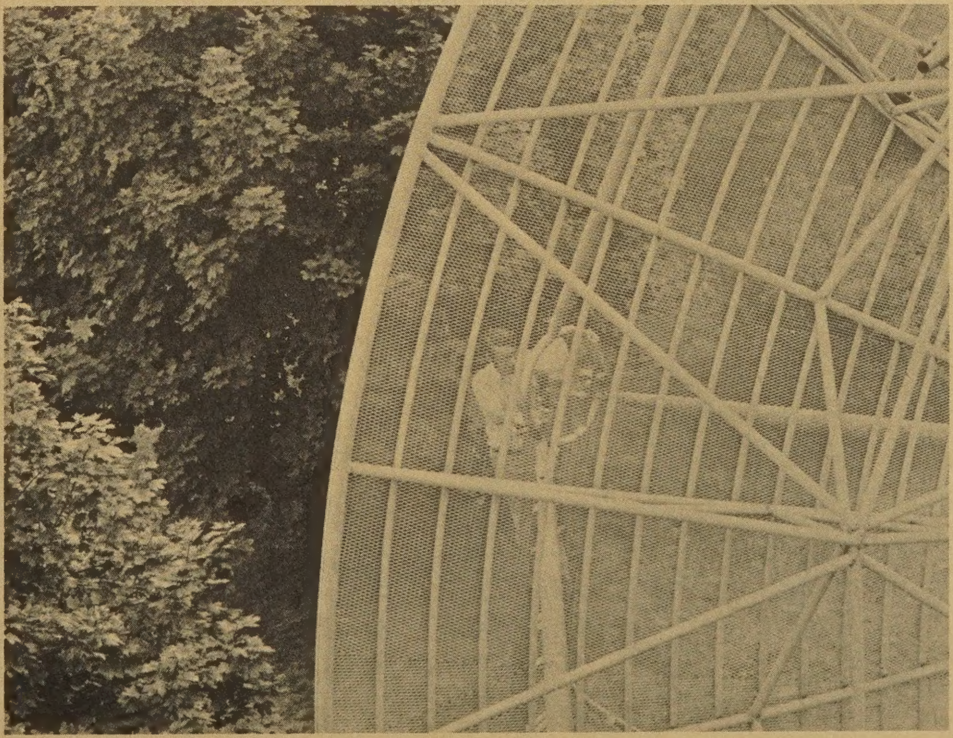
FCC COMMISSIONER ROBERT E. LEE: *"Amateur radio is a consuming avocation in one's youth; often an indispensable foundation for a professional career in electronics, and a source of tremendous pleasure and interest later in life."*

RADIO SCOUTING IN NORWAY: At the 14th World Scout Jamboree in Lillehammer, Norway, boys and girls—all Scouts—from more than 90 countries had the opportunity to participate in an active amateur radio program and demonstration. Amateur station LC1J was set up and put on the air by scouts from the host Scandinavian countries; in less than a fortnight 2362 contacts were made with hams in 105 countries, using voice, Morse code, teletype and slow-scan TV.

THE NOVICE LICENSE: Amateur radio licenses in the U.S. are issued by the Federal Communications Commission in five classes of progressively higher examination requirements and operating privileges. The Novice, or beginner license, is free; the examination is administered by any qualified amateur; and it requires only a five-word-a-minute Morse code proficiency plus the ability to answer 20 multiple choice questions on simple radio theory, practice and regulation. New Novices currently range in age from 5 to 80 and are demonstrating every day that anyone with the interest to do so can obtain a Novice license with a few weeks of study. (And ARRL's TUNE IN THE WORLD WITH HAM RADIO, a lively manual plus code tape, makes it easy and fun.)

FCC CHAIRMAN RICHARD E. WILEY: *"Based upon their magnificent past record in war and peace, I am convinced that many hams would still be at their sets when the very crack of doom reverberated through the atmosphere."*

MOONBOUNCE: Communicating via radio signals reflected from the moon is one of the more esoteric activities. But not only have amateurs accomplished this feat, one has even achieved verified moonbounce contacts with all of the world's continents. In ham terms he has won the Worked All Continents (WAC) Award on EME (earth-moon-earth). He is Allen Katz, K2UYH, of West Windsor, NJ, shown here working on his 28-foot dish antenna. Katz, chairman of the Engineering Technology Department at Trenton State College, was first licensed as a radio amateur at the age of 12.



TERREMOTO—AYUDA!

Carlos Peynados TG9CP

Earthquake—help! Those excited words in Spanish, breaking in on a casual on-the-air conversation between a ham in New Mexico and one in Ohio on the morning of February 4, 1976, were the first inkling to the outside world of the disaster that struck Guatemala. Over a period of several days the massive earthquake followed by innumerable aftershocks resulted in a death toll of nearly 25,000 and a million or more homeless. The early morning breaker was Carlos Peynados, TG9CP, in Guatemala City, operating his amateur station on emergency power. Within hours, not only were relief efforts well on the way, but amateurs in the Miami, New York, Los Angeles and other areas had swung into action on what proved to be a round-the-clock basis, using the skills and procedures developed over many years for just such emergencies. Officers of a Miami based, Spanish-speaking amateur organization, the Sociedad Internacional de Radio Aficionados, flew into Guatemala to survey the communications situation and requirements and to help organize the communications effort. Complete equipment for local radio contact was supplied by ARRL with the assistance of the Guatemalan airline. The amateur radio club at New York City's Hall of Science went on a 24-hour schedule to handle messages between Guatemalan residents in the metropolitan area and relatives in the stricken country. On the West Coast, the Palisades Amateur Radio Club set up a similar operation. An amateur station at the government command post in Guatemala City was its principal link with other communities in the devastated country, as well as the outside world.

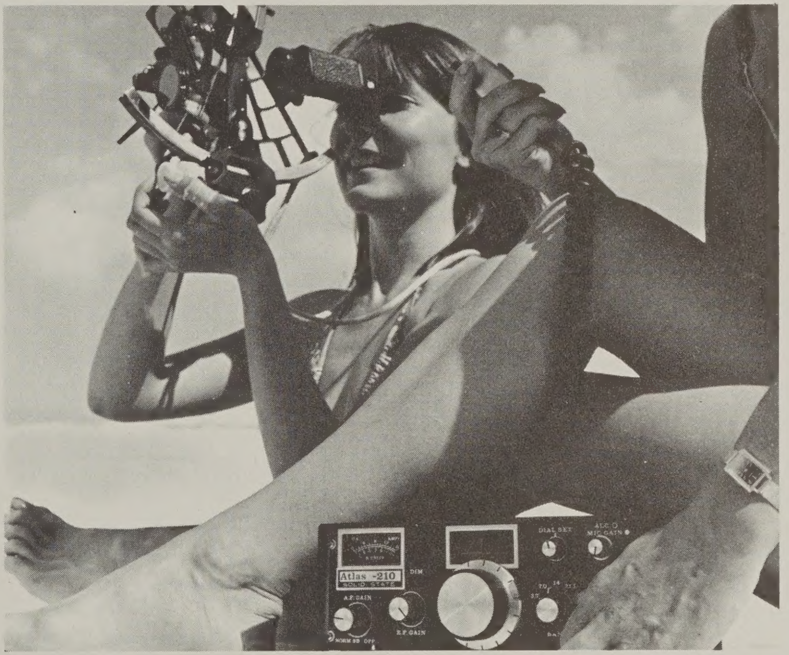
On May 18, 1976, supertyphoon Pamela hurled across the island of Truk in the central Pacific and on May 21 and 22 she ripped into Guam, leveling public buildings, destroying eight out of ten homes on the island, and eliminating telephone and other normal communications. In part, at least, because the ham emergency communications system in the Pacific had already gone into action, only three lives were lost. The amateur traffic net centered in Hawaii handled a massive volume of messages to and from government agencies, relief units, medical facilities and relatives in the U.S. and elsewhere. In these disasters, when a flash flood roared through Colorado's Big Thompson Canyon, when the sloop "Sorcery" rolled over in heavy seas 1000 miles southwest of Kodiak, Alaska, and in countless smaller emergencies, hams were ready and they responded.

WARC 79: A NEW LOOK AT FREQUENCY ALLOCATION

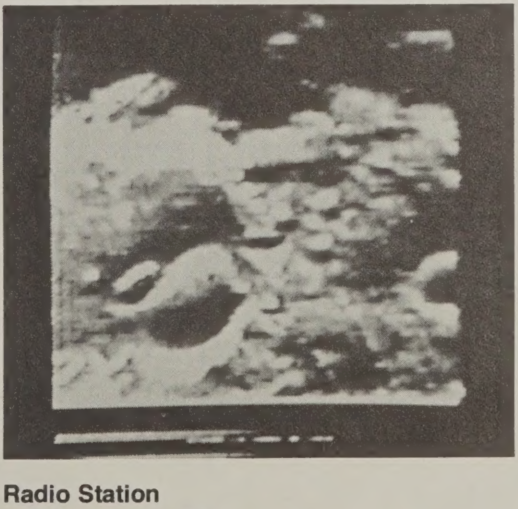
Global use of the radio frequency spectrum is governed by regulations of the International Telecommunication Union, an agency of the United Nations. These regulations are adopted and revised at periodic international conferences, with each of the 152 member-nations of the ITU entitled to one vote. It has been almost twenty years since a World Administrative Radio Conference (WARC) examined all of the allocations and realigned the bands available to the world's radio services—fixed, maritime mobile, aeronautical, broadcasting, navigation, amateur, and so on. Such a conference is now scheduled for late 1979. All services are carefully preparing to present their cases for frequency allocation at the Conference, including the Amateur Radio Service. As headquarters society for the International Amateur Radio Union, ARRL has been playing the leadership role in preparing the amateur position. Staff members have been doing the extensive research and documentation required by the amateur task force. League and IARU officials have been traveling extensively and meeting with member societies around the world to encourage and assist them in their work with their national governments. Amateurs expert in the complex art of frequency management have been working with the League. Just to hold its own in the frequency grab-bag is a difficult challenge for the Amateur Service; it is working hard to assure that a true recognition of the value of amateur radio as an international resource is established among all the WARC participants.

THE TODAY WORLD OF AMATEUR RADIO

From ham to astronaut: Dr. Owen K. Garriott, W5LFL



Marine mobile—amateur radio at sea



The Jet Propulsion Laboratory Amateur Radio Station
N6V, and an amateur television picture from Viking's landing on Mars.

THE AMERICAN RADIO RELAY LEAGUE
225 MAIN ST.
NEWINGTON, CONNECTICUT 06111